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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,530	12/08/2003	Wen-Yih Liao	JCLA10474	3704

7590  
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EXAMINER
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FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
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1792

MAIL DATE	DELIVERY MODE
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03/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/731,530	<b>Applicant(s)</b> LIAO ET AL.	
	<b>Examiner</b> William P. Fletcher III	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. The amendment and remarks after final, filed February 1, 2008, are noted with appreciation. The amendment has been entered.
2. Claims 1-20 remain pending.

### *Response to Arguments*

3. Applicant's arguments, see the remarks, filed February 1, 2008, with respect to the rejection(s) of claim(s) 1-20 under 35 USC 112, 2<sup>nd</sup> Paragraph, set forth in the Office action mailed September 21, 2007, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made both under 35 USC 112, 2<sup>nd</sup> Paragraph, and in view of Nishida et al. (US 6,349,086 B2).

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

A. Independent claims 1 and 17 recite both radiation-setting and light-cure. This is indefinite because it is unclear whether the claim requires the broader radiation-setting or the narrower light-cure.

B. Claims 2, 3, 18, and 20, recite alternative limitations in the form "wherein x comprises a, b, or c" which is indefinite. The transitional term "comprising" is inclusive or open-ended and does not exclude the additional, un-recited elements. See MPEP 2111.03. Consequently, these recitations using "comprising" are open to un-recited elements other than a, b, or c. As such, the metes and bounds of these claims are impossible to determine. The Examiner suggests review of MPEP 2173.05(h).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1, 2, and 7, are rejected under 35 U.S.C. 102(b) as being anticipated by Nishida et al. (US 6,349,086 B2).**

A. Claim 1: This reference teaches the claimed process in which a radiation-setting (specifically, UV light curing) resin is applied to a reflective layer on an optical substrate. The resin is then spun and cured while in contact with a plate and, ultimately, separated from the plate. See, for example, 8:10-9:55.

B. Claim 2: This reference teaches a glass plate. See 9:25-55.

C. Claim 7: This reference teaches the formation of a protective layer atop the reflective layer, prior to application of the UV curable resin. Since this layer does not deleteriously effect adhesion of subsequently applied layers, it is

the Examiner's position that this layer inherently serves as an "adhesive layer."

See 7:48-67.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**10. Claims 3-5 and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (US 6,349,086 B2).**

A. Claim 3: While this reference does not expressly recite the claimed radiation-setting resins, it is the Examiner's position that the claimed resins are well known in the art and would have been expedients readily obvious to one skilled in the art for the formation of the layer.

B. Claim 4: While this reference does not expressly teach repetition of the steps, repeated application to build up a layer of a desired thickness is known in the art and would have been readily obvious to one skilled in the art. Further, it is the Examiner's position that the process of Nishida is advantageously suited for the formation of multi-layer optical structures, which would also render this claim obvious.

C. Claim 5: While this reference does not expressly teach the claimed thickness range, it is the Examiner's position that this thickness is a result-effective variable, determining the optical properties of the disc. Consequently, it would have been obvious to one skilled in the art to optimize this result-effective variable by routine experimentation, absent evidence of criticality. See MPEP 2144.05.

D. Claims 8-10: While this reference does not expressly teach the claimed NA and wavelengths, this reference does teach that these are physical properties determined by the deposited layers. See 1:27-57. As such, it would have been obvious to one skilled in the art to select, by routine experimentation, those properties such that the desired wavelengths and NA values are obtained. See MPEP 2144.05

E. Claims 11-16: While this reference does not expressly teach the claimed types of discs, it does not expressly preclude any. Consequently, it would have been obvious to one skilled in the art to manufacture any and all of the claimed discs, absent evidence to the contrary.

***Allowable Subject Matter***

11. Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. Claim 17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Claims 18-20 would be allowable in their current, dependent form if the rejection of claim 17 under 35 USC 112, 2nd paragraph, were overcome.

13. The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 6, in the process of Nishida, the center hole is blocked and removal is by peeling, thus precluding the claimed center hole blowing. With respect to claims 17-20, the prior art neither teaches nor suggests the process in which the plate has an adhesive layer thereon.

***Conclusion***

14. The prompt development of clear issues in the prosecution history requires that applicant's reply to this Office action be fully responsive (MPEP § 714.02). When filing an amendment, applicant should specifically point out the support for any amendment made to the disclosure, including new or amended claims (MPEP §§ 714.02 & 2163). A fully responsive reply to this Office action, if it includes new or amended claims, must therefore include an explicit citation (i.e., page number and line number) of that/those portion(s) of the original disclosure which applicant contends support(s) the new or amended limitation(s).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Sunday, 5:00 AM - 12:00 PM and Monday through Friday, 5:00 AM - 3:30 PM; on campus every Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/William Phillip Fletcher III/**  
Primary Examiner

February 25, 2008